

## Oxygen for Passengers . . . . .

flow used by airlines is 2.3 litres/minute.) In this connection it is assumed that stewardesses will be trained in the use of these cots, etc.

Although the "Oxycot" is designed for use in an open state, a cellophane cover is provided which, fastened with press studs, can be used as a means of draught exclusion should this be necessary. It is not likely that the normal flow of ventilation air inside an aircraft cabin will be such as to give a draught of sufficient strength to incur a loss of oxygen from the cot by "scooping," but the possibility does exist and the cellophane cover is a means of combating this: it also serves as a protec-

tion for the infant when being carried out to the aircraft in inclement weather. The cover is not a tight fit—there is ample room between the press studs—and, in the event of failure of the oxygen supply, the vitiated air (being considerably lighter) can rise to the top and escape whilst the oxygen content inside the cot should be enough for the child for a period of about an hour. There is, of course, no question of an aircraft having to remain at "oxygen height" for an hour without oxygen supply.

Oxygeneaire, Ltd., intend that the "Oxyair" mask should be a purchasable commodity, whilst the "Oxycot" should be either purchasable or hireable, but preferably the latter since this permits periodical servicing by specialists. The "Oxycot" is at present undergoing test by B.O.A.C.

# Safety First

## How "Hot-Stuffing" can Ruin the Smooth Running of an Airline

By Captain T. NEVILLE STACK, A.F.C.

THE public at large, and for that matter the non-technical and non-operational types in air transport companies, do not and cannot appreciate the amount of detail work and inspection, not to mention the odd test flights, that have to be carried out before an aircraft is considered satisfactory to undertake a flight, in particular a long-distance one.

An aircraft is an extremely temperamental thing. I have known them perfectly serviceable an hour before take-off, and upon taxiing-out some trouble developed. Not only this; they have also a propensity for developing some snag even whilst standing and waiting. The Royal Air Force attribute this to "Gremlins."

Therefore the greatest care and minutest detail inspection is constantly necessary. These things cannot be done efficiently in five minutes—a rushed job is usually a botched job, with the result that something is overlooked.

It is essential that those who maintain aircraft in operating companies should be intimately conversant with the type being operated, and should know exactly where to place their hand on the cause of the trouble, and where to keep an eye on any weak spots where trouble is likely to develop in the whole box of tricks.

This can only be done by the right type of maintenance engineers and inspectors, who must be men engaged the whole time on the work and experienced in tracing faults quickly, and in rectifying them without delay.

Men engaged on factory routine cannot compare with the maintenance mechanic in this respect. They can take their time—and do.

Maintenance engineers must work quickly and at all hours. Air transportation is a 24-hour job, and only the best and most willing mechanics, with a pride in their calling and in the reputation of the company, are worth while employing. They are few and far between.

**Safety.**—The safety and successful undertaking of an air journey depends upon many factors the chief of which can be detailed as under:—

1. Good inspection and maintenance.
2. Competent operations department and aircrews.
3. Careful briefing and flight planning.
4. Caution in regard to weather.
5. Attention to correct loading of the aircraft.

Number 1 is covered by the technical and maintenance staff but can be upset by unreasonable demands being made upon it, forcing and rushing unnecessarily the work to be done.

Numbers 2, 3 and 4 are covered by operations departments and attention to detail by aircrews.

Number 5 is covered by traffic handling departments and captains of aircraft.

**Hot-stuffing.**—What can upset the smooth running of an organization such as that outlined?

The first and most common is "hot stuffing." It usually starts with a couple of disgruntled or impatient passengers, frequently the loud-mouthed and least intelligent and imaginative ones.

The cause may be a delay due to weather or to some unforeseen snag having arisen (*Gremlins* again)!

They communicate their impatience to everyone else and also to the traffic staff. If it is a maintenance snag, the traffic staff start "hot-stuffing" the maintenance department, who in their turn, due to haste, may overlook something that could well cause delay on route or a return after take-off.—"More haste less speed."

If it is weather, they get at the captain and by devious ways endeavour to make him take off against his better judgment. They all know more than the pilot. One can quite well understand, and sympathize with, passengers in their delay, but better a day late than never to arrive.

**Loading.**—The loading of the aircraft must be correctly done and not in a haphazard manner. Overloading must be avoided, balance must be maintained and the aircraft loaded in conformity with limits of the travel of centre of gravity, otherwise the aircraft may be made unstable and, under certain conditions, become dangerous.

Therefore loading cannot be hastened nor cargo thrown in as into a railway truck or waggon.

**Petrol Load as Against Pay Load.**—Under this heading arises a point worth noting.

I have heard of cases when petrol has been off-loaded in order to put on more payload, leaving the aircraft with the barest minimum of fuel to reach its destination.

This, in my opinion, is criminal and, in the event of a head wind springing up or diversion due to bad weather, gives little or no chance to the captain.

**Fuel Load.**—It has always been my practice to allow for 25 per cent fuel reserve and a minimum head wind of 10 m.p.h. under normal conditions. This allows for most eventualities and diversions. No aircraft should leave the ground unless everyone concerned, ground crew and aircrew are content and confident. There should be no doubts.

Why is it that B.O.A.C., B.E.A., and Aer Lingus have such a splendid record of safety?

1. Excellent maintenance, good inspection and rectifications thoroughly and speedily but not hastily done.
2. First-class, experienced aircrews.
3. No hesitation in cancelling or delaying on account of weather or minor snags arising.
4. Ample reserve fuel for the leg of the journey to be accomplished.

Providing these things are carried out conscientiously and efficiently, and without that last-minute panic which invariably arises from "hot-stuffing," nothing need be forgotten nor left undone. Then risk of accidents would be brought down to the very minimum.

Cut out "hot-stuffing," "forcing-on regardless" and "cutting reserve fuel," then all will get to the other end in one piece.

PER ARDUA AD ASTRA.